

Draft/Proposed

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Virginia House Furniture Corporation
357 Bear Creek Road, Atkins, Virginia
Permit No. SWRO10424

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Virginia House Furniture Corp. has applied for a Title V Operating Permit modification for its Atkins, Virginia – Plant 2 facility. The Department has reviewed the application and has prepared a **draft** Title V Operating Permit.

Engineer/Permit Contact: _____ Date:
E. Cliff Musick
(276) 676-4833

Air Permit Manager: _____ Date:
Rob Feagins

Regional Permit Manager: _____ Date:
Dallas R. Sizemore

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 2

FACILITY INFORMATION

Permittee

Vaughan-Basset Furniture Co., Inc.
dba Virginia House Furniture Corporation
300 East Grayson Street
Galax, Virginia 24333

Facility

Virginia House Furniture Corporation
357 Bear Creek Road
Atkins, Virginia

AFS ID No. 51-173-00035

SOURCE DESCRIPTION

SIC Code: 2511 – Wood Furniture Manufacturing

The company manufactures wood furniture items. The processes include lumber drying, woodworking, assembly, and finishing.

The facility is a Title V major source of particulate matter emissions. The facility has been a major source of volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions, and is subject to MACT JJ – National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations. The current HAP emissions potential is below major thresholds, but the company anticipates that finishing operations could resume in the future. This source is located in an attainment area for all pollutants, and is considered minor with respect to PSD regulations. The facility is currently permitted under a Minor NSR Permit issued on December 15, 2004.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility was issued a Warning Letter on November 24, 2004 alleging noncompliance with the permit condition limiting consumption of coating material by spray booth SB-12. The company obtained approval to use an alternative material in a permit issued December 15, 2004.

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 3

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
ES-1		Bigelow Model 3090 wood-fired boiler - 1954	29.0 million Btu/hr	Zurn multicyclone	CD-1	PM	12/15/04
ES-2*		Hurst Model S65-X-384-150 wood-fired boiler - 1999	20.2 million Btu/hr	Zurn multicyclone	CD-2	PM	12/15/04
Lumber Dry Kilns							
ES-6		3 SII Lumber Dry Kilns	110,000 Bd-ft/2 weeks, each	----	----	----	12/15/04
Finishing Operations							
SB-12		1 spray booth	Various	filters	----	PM	12/15/04
Woodworking							
ES-5		Various saws, sanders, shapers, etc.	-	Three Carter Day baghouses	CD-3 - CD-5	PM	12/15/04

* In 1999, the current Hurst boiler replaced a 28.7 MMBtu/hr Kewanee Model 588 wood-fired boiler.

EMISSIONS INVENTORY

Emissions are summarized in the following tables:

2003 Actual Emissions

	2003 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO ₂	PM ₁₀	NO _x
ES-1 & ES-2	0.31	14.1	0.59	3.2	11.57
SB-12	----	----	----	----	----
ES-5	----	----	----	0.16	----
ES-6	0.25	----	----	----	----
Total	0.56	14.1	0.59	3.36	11.57

2003 Facility Hazardous Air Pollutant Emissions

Pollutant	2003 Hazardous Air Pollutant Emission in Tons/Yr
HCl	0.44

EMISSION UNIT APPLICABLE REQUIREMENTS – Bigelow Boiler (ES-1)

Limitations

The following limitations are requirements from Conditions 3, 7, 20, and 27 of the Minor NSR Permit issued on December 15, 2004:

Condition 3 requires that particulate emissions from the boiler be controlled by a multicyclone.

Condition 7 limits the approved fuel to wood.

Condition 20 requires the company to keep records of tons of wood combusted in the boiler on a monthly and annual basis.

Condition 27 requires that excess emissions from boilers and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been

Draft/Proposed

determined to be applicable:

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions - The unit was installed in 1977 according to file information. The unit was reportedly constructed in 1954. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%.

The unit is subject to emission standards outlined in 9 VAC 5-40, Article 8 in the absence of any standards from Chapter 50 of State Regulations.

9 VAC 5-40-900, Standard for Particulate Matter (PM) - Since the boiler was installed prior to 1979, by definition, it is considered a fuel burning equipment installation. According to 9 VAC 5-40-900 A.1.b, the unit may not emit more particulate matter than can be calculated by the formula:

$$E = 1.0906 H^{-0.2594}$$

where E is particulate emissions in lb/MMBtu and H is the heat rating of the unit (29.0 MMBtu/hr). The resulting particulate matter emission standard is,

$$E = 1.0906(29.0)^{-0.2594} \text{ lb/MMBtu} = 0.46 \text{ lb/MMBtu}$$

9 VAC 5-40-930, Standard for Sulfur Dioxide - Sulfur dioxide emissions are limited according to the formula:

$$S = 2.64 K \quad \text{where, } S \text{ is lb/hr of SO}_2, \text{ and} \\ K \text{ is the heat capacity of the unit (MMBtu/hr).}$$

$$(2.64)(29.0) = 76.6 \text{ lb/hr SO}_2$$

Monitoring

The monitoring and recordkeeping requirements in Condition 20 of the NSR permit have been modified to meet Part 70 requirements.

Compliance with the emission limits can be demonstrated by computations involving acceptable emission factors as shown below:

$$E = F \times W, \text{ where}$$

E = Emission rate (lb/time period)

F = Emission factors from AP-42, Section 1.6, SCC 1-02-009-06 shown below

PM = 1.3 lb/T of woodwaste (accounting for 85% control by multicyclone)

SO₂ = 0.15 lb/T of woodwaste

W = Wood combusted (T/time period)

The calculated emission rates can be compared to the maximum allowable emission rates given by:

$$\begin{array}{ll} \text{PM} & (0.46 \text{ lb/MMBtu})(29.0 \text{ MMBtu/hr}) = 13.3 \text{ lb/hr} \\ \text{SO}_2 & 76.6 \text{ lb/hr} \end{array}$$

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 6

Compliance will be confirmed if the calculated emission rate is less than the maximum allowable emission rate. Using a conservative heating value of 6,000 Btu/lb of dry woodwaste, maximum expected emissions are:

$$\begin{array}{ll} \text{PM} & (29.0 \times 10^6 \text{ Btu/hr/6000 Btu/lb})(1 \text{ T/2000 lb})(1.3 \text{ lb/T}) = 3.14 \text{ lb/hr} \\ \text{SO}_2 & (29.0 \times 10^6 \text{ Btu/hr/6000 Btu/lb})(1 \text{ T/2000 lb})(0.15 \text{ lb/T}) = 0.36 \text{ lb/hr} \end{array}$$

Therefore, as long as the boiler is operated properly, compliance with the emission standards is expected. Violation of the particulate matter emission standard would be extremely unlikely under normal operating conditions. Compliance has traditionally been determined using opacity as an indicator of particulate matter emissions. Compliance with the particulate matter standard may be determined by periodic visible emissions checks on the boiler exhausts as explained below, and annual multicyclone inspections. Compliance with the SO₂ emission standard will be insured by virtue of the low sulfur content of typical woodwaste. No other monitoring will be required.

The permit contains a requirement to perform weekly visible emission observations on the boiler stack. If visible emissions are present at a level above 10% opacity, a six-minute visible emission evaluation (VEE) must be performed according to 40 CFR 60, Appendix A, Method 9. If during the six-minute period, the average opacity exceeds 20%, the company must then take corrective action. If corrective action fails to produce opacity less than 20%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The boiler is equipped with a multicyclone for particulate matter control. Such control devices, if properly operated and maintained, will help insure compliance with the opacity and particulate matter requirements. The permit requires that the multicyclones be equipped with devices for the continuous measurement of pressure drop, which will also aid in insuring that the control devices are operated properly. An annual multicyclone inspection will be required to insure structural integrity.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include tons of wood combusted in the boiler, records of visible emissions evaluations, a list of approved emission factors for the unit, emission estimates using those factors and annual multicyclone inspection results.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the boiler.

Streamlined Requirements

The company did not propose any specific streamlining regarding the boiler.

EMISSION UNIT APPLICABLE REQUIREMENTS – Hurst Boiler (ES-2)

Limitations

The following limitations are requirements from Conditions 3, 7, 8, 11, 15, 19, 20, and 27 of the Minor NSR Permit issued on December 15, 2004:

Condition 3 requires that particulate emissions from the boiler be controlled by a multicyclone.

Condition 7 limits the approved fuel to wood.

Condition 8 limits the wood consumed in the boiler to 10,345 tons/yr, calculated as the sum of each consecutive 12-month period.

Condition 11 limits emissions from the boiler to the following:

POLLUTANT	EMISSION LIMIT	
	lb/MMBtu	T/yr
Particulate Matter/PM10	0.3	6.8
Carbon Monoxide		70.3
Sulfur Dioxide		0.8
Nitrogen Oxides (as NO ₂)		7.8
Volatile Organic Compounds		1.1

Condition 15 limits opacity from the boiler to 20%, except for one 6-minute period not to exceed 27%.

Condition 19 requires that the boiler be operated in compliance with 40 CFR 60, Subpart Dc pertaining to small boilers.

Condition 20 requires the company to keep records of tons of wood combusted in the boiler on a monthly and annual basis.

Condition 27 requires that excess emissions from boilers and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 8

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions - The unit was installed in 1999 according to file information. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%.

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This applies to this unit. This boiler has been permitted under the minor NSR program, and state BACT measures have been applied.

40 CFR 60.40c-48c, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, apply to the unit.

Monitoring

The monitoring and recordkeeping requirements in Condition 20 of the NSR permit have been modified to meet Part 70 requirements.

Compliance with the emission limits can be demonstrated by computations involving acceptable emission factors as shown below:

$$E = F \times W, \text{ where}$$

E = Emission rate (lb/time period)

F = Emission factors from AP-42, Section 1.6, SCC 1-02-009-06 shown below

PM = 1.3 lb/T of woodwaste (accounting for 85% control by multicyclone)

PM₁₀ = 1.3 lb/T of woodwaste (accounting for 85% control by multicyclone)

SO₂ = 0.15 lb/T of woodwaste

CO = 13.6 lb/T of woodwaste

NO_x = 1.5 lb/T of woodwaste

VOC = 0.22 lb/T of woodwaste

W = Wood combusted (T/time period)

Compliance will be confirmed as long as the calculated emission rates are less than the permitted emission rates. The permitted emission limits were established using the above emission factors and the fuel consumption limit. As long as the wood consumed does not exceed the permitted limit of 10,345 tons per year, the emission rate should not exceed the permitted emission rate.

Therefore, compliance will be determined by monitoring records of wood combustion and insuring that the boiler is maintained and operated properly. Opacity will be a primary indicator of proper operation. Compliance with the emission limits should be further warranted by the exclusive combustion of woodwaste as fuel.

Compliance with the particulate emission limit of 0.3 lb/MMBtu may be shown using a conservative heat content of 6,000 Btu/lb of dry woodwaste:

$$\text{PM/PM}_{10} \quad (20.2 \text{ MMBtu/hr})(0.3 \text{ lb/MMBtu}) = 6.1 \text{ lb/hr (allowable)}$$

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 9

$$(20.2 \text{ MMBtu/hr})(1 \text{ lb/6000 Btu})(1 \text{ T/2000 lb})(1.3 \text{ lb/T}) = 2.2 \text{ lb/hr (predicted)}$$

Since the potential emissions using the emission factor are smaller, compliance is predicted. The emission factors represent a typical properly operated unit. Records of weekly opacity observations will show that the unit is operating properly, and should meet periodic monitoring requirements for the boiler. Violation of the particulate matter emission standard would be unlikely under normal operating conditions. As long as the boiler is operated properly, compliance with the emission limit is expected.

The permit contains a requirement to perform weekly visible emission observations on the boiler stack. If visible emissions are present at a level above 10% opacity, a six-minute visible emission evaluation (VEE) must be performed according to 40 CFR 60, Appendix A, Method 9. If during the six-minute period, the average opacity exceeds 20%, the company must then take corrective action. If corrective action fails to produce opacity less than 20%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The boiler has been equipped with a multicyclone for particulate matter control. Such control devices, if properly operated and maintained, will help to insure compliance with the opacity requirements. The permit requires that the multicyclone be equipped with devices for the continuous measurement of pressure drop, which will also aid in insuring that the control device is operated properly. An annual multicyclone inspection will be required to insure structural integrity and proper operation.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include monthly and annual wood combustion rates, results of weekly visible emission evaluations and annual inspections, a list of approved emission factors for the unit, and emission estimates using those factors.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the boiler.

Streamlined Requirements

The minor NSR permit established opacity limits more stringent than those required by 9 VAC 5-50-80, in that one 6-minute period in any one hour cannot exceed 27%. This is slightly more stringent

than the 30% opacity allowed in 9 VAC 5-50-80. Therefore, the requirement is appropriate for streamlining.

EMISSION UNIT APPLICABLE REQUIREMENTS – Lumber Dry Kilns (ES-6)

Limitations

The following limitations are requirements from Conditions 10, 14, 20, and 27 of the Minor NSR Permit issued on December 15, 2004:

Condition 10 limits lumber throughput to the 3 kilns to 8.58 million board-feet per year.

Condition 14 limits VOC emissions from the 3 kilns to 14.6 tons per year.

Condition 20 requires the company to keep monthly records of lumber throughput to the 3 kilns.

Condition 27 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

Monitoring

The monitoring and recordkeeping requirements in Condition 20 of the NSR permit have been modified to meet Part 70 requirements.

These units are not considered sources of visible emissions, therefore, no opacity standards apply, and no observations are required.

Monthly and annual lumber throughput must be monitored. VOC emissions will be calculated using approved emission factors for hardwood and softwood.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include monthly and annual lumber throughput and VOC emissions.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for this operation.

Streamlined Requirements

No streamlining is proposed for this operation.

EMISSION UNIT APPLICABLE REQUIREMENTS – Finishing Operations (SB-12)

Limitations

The following limitations are requirements from Conditions 6, 9, 13, 18, 20, and 27 of the Minor NSR Permit issued on December 15, 2004:

Condition 6 requires that spray booth SB-12 be equipped with filters for particulate control.

Condition 9 limits the throughput of Woodsize Concentrate at spray booth SB-12 to 19,607 gallons per year.

Condition 13 limits emissions from spray booth SB-12 to:

POLLUTANT	EMISSION LIMIT	
	Lb/hr	T/yr
Particulate Matter/PM10	0.7	1.7
Volatile Organic Compounds	0.2	0.5

Condition 18 limits opacity from spray booth SB-12 to 5%.

Condition 20 requires that the company keep records of all adhesive materials used on a monthly and annual basis, MSDS information, and annual VOC emissions estimates.

Condition 27 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100, EPA National Emission Standards for Hazardous Air Pollutants for Source Categories - Wood Furniture Manufacturing Operations - 40 CFR 63.800 - 819. The company has complied with these requirements in the past by using compliant coatings. The adhesive material applied in SB-12 is not subject to the MACT, but the company anticipates installation of future coating equipment/operations that will have to comply with MACT requirements.

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 12

applies to spray booth SB-12. This booth has been permitted under the minor NSR program, and state BACT measures have been applied.

Monitoring

The monitoring and recordkeeping requirements in Condition 20 of the NSR permit have been modified to meet Part 70 requirements. The monitoring requirements of the Wood Furniture Manufacturing MACT are included in the permit. These provisions meet periodic monitoring requirements.

Spray booth SB-12 is controlled by filters resulting in a PM10 control efficiency of 85%. Calculations of PM10 emissions will reflect these figures. This booth may only spray one material and compliance with the PM10 emission limit should be more convenient to determine based on monthly usage figures and hours of operation. Compliance with the VOC emission limit may be likewise demonstrated by not exceeding the adhesive material throughput limitations. The company will calculate hourly and annual VOC emissions based on VOC content and material consumption. Hourly emissions will be estimated by monthly emissions divided by hours of operation.

Weekly checks on visible emissions are required by the permit. If visible emissions are observed, the company will conduct a six-minute visible emissions evaluation (VEE) using 40 CFR 60, Appendix A, Method 9. If during the six minutes, the average opacity reading exceeds 5%, the company must take corrective action. If corrective action fails to produce opacity less than 5%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include results of visible emissions checks and emission calculations.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for this operation. Wood Furniture MACT requirements are included in the Title V permit, and include compliance certification submittals and semiannual reports to establish compliance. Although these requirements do not apply to the application of vinyl acetate adhesive, they do apply to any active coating operations at the facility. If no coating activities occur, the reports and submittals are still required.

Streamlined Requirements

The company did not propose any specific streamlining regarding the finishing operation.

EMISSION UNIT APPLICABLE REQUIREMENTS – Woodworking Operations (ES-5)

Limitations

The following limitations are requirements from Conditions 4, 5, 12, 16, 17, and 27 of the Minor NSR Permit issued on December 15, 2004:

Condition 4 requires that particulate matter (PM) emissions from the woodworking equipment be controlled by fabric filters.

Condition 5 requires that material transferred from the fabric filters be controlled by fabric filters or an enclosed transfer system.

Condition 12 limits emissions from the woodworking equipment to 0.01 gr/dscf and 94.6 T/yr of PM and PM10.

Condition 16 limits visible emissions from the fabric filters to 5% opacity.

Condition 17 limits visible emissions from fugitive sources to 10% opacity.

Condition 27 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This applies to the woodworking emissions. The minor NSR program has required fabric filter control, and state BACT emission limits were established.

9 VAC 5-40-80 - 90, Standard for Visible Emissions and Standard for Fugitive Dust/Emissions - 20% opacity except for one 6-minute period not to exceed 60%. This requirement applies to all existing woodworking equipment. Reasonable precautions are necessary to prevent fugitive dust.

9 VAC 5-50-80 - 90, New Source Standard for Visible Emissions and Standard for Fugitive Dust/Emissions– Some woodworking equipment was installed after 1972. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%. Reasonable precautions are necessary to prevent fugitive dust.

Monitoring

The monitoring and recordkeeping requirements in Condition 20 of the NSR permit have been modified to meet Part 70 requirements.

The woodworking equipment in operation is required to meet a particulate emission limitation of 0.01 gr/dscf of exhaust gas. As long as the PM emissions are vented through a properly operating control device, the standard is readily attained. PM emissions are vented through baghouses that are reportedly capable of achieving 99.9% control. Therefore, as long as the control devices are properly maintained and operated, there is little likelihood of violating the 0.01 gr/dscf standard.

The visible emissions from the woodworking equipment as exhausted from fabric filters are limited to 5% opacity by the NSR permit. The company will be required to perform weekly visible emission evaluations (VEEs) of each fabric filter to determine the presence of visible emissions. If visible emissions are observed, the company will conduct a six-minute visible emissions evaluation (VEE) using 40 CFR 60, Appendix A, Method 9. If during the six minutes, average opacity readings exceed 5%, the company must take corrective action. If corrective action fails to produce opacity less than 5%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The weekly VEEs will also satisfy the periodic monitoring requirement for the visible emission limitation. Frequent checks for visible emissions will limit the impacts of malfunctions of the control equipment. As long as the control equipment is operating properly, there is little likelihood of violating the visible emission limitation. The permit requires that the baghouses be equipped with devices for continuous measurement of pressure drop. This will aid in determining if the control devices are operating properly.

The weekly VEEs satisfy the periodic monitoring requirement for the woodworking equipment.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include annual wood processing rates and the results of the weekly baghouse VEEs.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the woodworking operations.

Streamlined Requirements

The company did not propose any specific streamlining regarding the woodworking operation.

Because some woodworking equipment was installed after 1972, it is subject to new source requirements in 9 VAC 5-50-80, Standard for Visible Emissions, while the remainder of the woodworking equipment is subject to existing source requirements in 9 VAC 5-40-80. The requirements are essentially the same (20% opacity), except that existing sources are limited to one 6-minute period not to exceed 60% opacity, rather than 30% opacity for new sources. However, the NSR permit establishes BACT limits of 5% opacity for fabric filter control of woodworking equipment. Therefore, this more stringent standard applies.

The fugitive dust requirements for existing and new sources are found in separate regulations (9 VAC 5-40-90 and 9 VAC 5-50-90, respectively), which include nearly identical standards. However, the NSR permit limits fugitive emissions to 10% opacity. This is more stringent than the requirements of 9 VAC 5-40-90 or 9 VAC 5-50-90. Therefore, these requirements may be streamlined in the Title V permit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

The permit contains references to the administrative requirements outlined in 9 VAC 5 Chapter 20. 9 VAC 5 Chapter 40, Part I identifies general requirements for existing sources. The provisions of 9 VAC 5-40-20 outline compliance demonstrations by existing sources. The company listed this general requirement for existing sources which details how compliance will be determined in the case where stack testing or specific monitoring devices are required.

The Title V permit also contains general conditions from the Minor NSR Permit issued on December 15, 2004. The following limitations are requirements from the NSR permit:

Condition 21 requires that the facility be constructed to allow for emissions testing.

Condition 24 states that the company must allow state and local representatives to enter the premises.

Condition 25 requires notification in the case of excess emissions due to equipment failure or malfunction.

Condition 26 requires the company to reduce operation or shut down when requested in order to avoid a violation of a primary ambient air quality standard.

Condition 27 requires the company to maintain records of maintenance and develop an inventory of spare parts to minimize excess emissions.

Condition 28 states that the Department has the authority to revoke or modify the NSR permit.

Condition 29 requires notification in case of change in ownership.

Condition 30 requires the company to respond to requests of information related to emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-50. Notification, Records and Reporting

9 VAC 5-50-50. Notification, Records and Reporting

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5 Chapter 40, Part II, Article 2 – Emission Standards for Odor – states that the company may not discharge emissions causing objectionable odor. This requirement is not included in the State Implementation Plan and is considered state-only enforceable.

9 VAC 5 Chapter 60, Part II, Article 4 – Emission Standards for Toxic Pollutants from Existing Sources – requires the company to comply with emission standards for toxic air pollutants. This requirement is not included in the State Implementation Plan and is considered state-only enforceable.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

FUTURE APPLICABLE REQUIREMENTS

The company did not identify any future applicable requirements in the application. However, **MACT Subpart DDDD – Plywood and Composite Wood Products**, 40 CFR 63.2230-2292, applies to lumber dry kilns at any facility. No standards apply to such kilns, but there are initial notification, recordkeeping, and reporting requirements.

INAPPLICABLE REQUIREMENTS

The company indicated that the requirements of 112(r) of the Clean Air Act do not currently apply to this facility. The company did not identify any other inapplicable requirements.

NSPS Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c - 48c, does not apply to the Bigelow boiler since it was installed prior to 1989.

NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60.110b – 117b, does not apply to three 4000-gallon storage tanks at the plant. These units are well below the 75 m³ (19,789 gallons) capacity threshold for applicability of this rule.

MACT Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480-7575, describes affected sources subject to standards. The boilers at the facility are fire-tube units, and are defined as small units. Although they are considered affected sources, there are no requirements for such units.

Draft/Proposed

Virginia House Furniture Corporation
SWRO10424
Statement of Basis
Page 19

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation ¹ (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
ES-4	4 Lumber Dry kilns	9 VAC 5-80-720 B	VOC	----
BST-1	Lacquer Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----
BST-2	Sealer Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----
BST-3	Thinner Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----
VP-1	Veneer Cold Press	9 VAC 5-80-720 B	VOC	----
VP-2	Veneer Shaper	9 VAC 5-80-720 B	VOC	----

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The draft permit will be place on public notice in the *Smyth County News & Messenger* on [date] , and the public comment period will extend through [date] .